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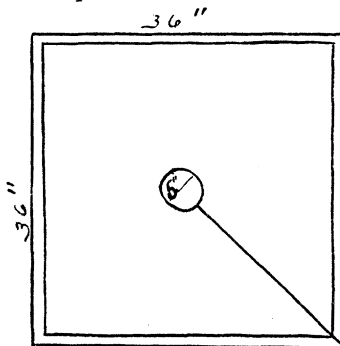
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weather. It is thirty-six inches square. The hem may be any width, the flannel needing at least a two-inch hem. The neck and the diagonal are cut and bound with tape. The diameter of the neck is five inches.



III

A USE FOR A DISCARDED CATHETER

By AGNES NEWBOLD, *Peoria, Ill.*

While on a recent case I discovered that a small rubber catheter, marked in inches and slipped inside a glass drinking tube to hold it firm, was quite a help in determining whether or not the solution was flowing from the ordinary can used during a bladder irrigation. It was sterilized with the can.

SOME MISCONCEPTIONS CONCERNING BLINDNESS IN THE NEW-BORN

By CAROLYN CONANT VAN BLARCOM, R.N.

Secretary, National Committee for the Prevention of Blindness, New York, N. Y.

The work for the prevention of unnecessary blindness is one of the most recent developments of preventive medicine or the general movement to conserve life and health. In common with other phases of public health work, it has been necessary first to study the extent and various causes of unnecessary blindness, and then to conduct a vigorous educational campaign in order that the public at large might know something of these causes and the measures which may be adopted to avert them.

It seems to be quite generally understood that much blindness is preventable, to be accurate, about 50 per cent, and of the various preventable causes, ophthalmia neonatorum, or babies' sore eyes, is the most prolific.

Although organized work for the prevention of blindness is recent, the pathos and horror of infantile blindness has stirred medical men to action since the earliest days of medicine. There seems to have been a

realization that something was present in babies' sore eyes capable of setting up inflammation and causing blindness, which could and should be removed or destroyed. This may explain why the ancients dropped oil in the eyes of their infants.

More than a hundred years ago, in 1807, Benjamin Gibson, an Englishman, made very sound recommendations for the prevention of blindness, advising that every child's eyes be washed immediately after birth with, as he expressed it, "a liquid calculated to remove the offending matter or to prevent its noxious action." There are many references of a similar nature to be found in medical literature, but in 1881 Professor Credé, a Leipsic obstetrician, made the most valuable contribution to this subject which had thus far been offered. Briefly, he advised that every child's eyes should be carefully wiped from the nose outward, immediately after birth and that a drop of a two per cent solution of silver nitrate should be put into each eye. As a result of this treatment, Professor Credé reduced the occurrence of sore eyes among the babies in his maternity hospital from about one in every ten cases to one in every four hundred. In addition to this preventive treatment, patients were watched for any signs of inflammation of the eyes, such as redness, swelling or discharge, at any time within the first two or three weeks.

It is on these two measures, that is, the routine use of a prophylactic, preferably some one of the silver salts, in every infant's eyes immediately after birth, and close vigilance for symptoms of inflammation in order that prompt and skillful treatment may be given, that we rest the entire movement for the safeguarding of the eyes of the new-born.

Almost invariably, children who lose their sight as a result of infant ophthalmia are born into the world with normal, healthy eyes. Some time within the first two weeks, the eyes become infected, look red and swollen, discharge yellow pus, and finally the sight is lost. Many of these children go through life in utter darkness, although the eye itself is unharmed except for the cornea which is scarred, shutting out the light much as a shutter or blind darkens a room.

So far as we are able to estimate, about a quarter of all the children in the schools for the blind throughout this country and Canada are blind because of this eye disease, incurred during infancy, and about 10 per cent of the total blindness in the United States is due to this cause. Thus, there are about 10,000 persons in this country who are blind because their eyes were neglected during infancy and they might have vision today had prophylaxis and vigilance been exercised in the beginning. Quite evidently, there have been some doctors and some midwives who have failed to do their known duty.

It has seemed wise to extend not only educational work among the medical profession and among nurses and mid-wives, but to inform the lay public of the importance of having every child's eyes treated as a routine, and subsequently, should symptoms of ophthalmia neonatorum develop, to have that baby's eyes treated without any regard to race, color, creed or social status.

Like other infectious diseases, for sore eyes in babies is recognized as an infectious disease, the trouble is due to some kind of a germ or infecting organism. But, as is apt to be the case when scientific knowledge is popularized, certain misconceptions have gained currency regarding the cause of infantile blindness. Some of these misconceptions are harmless, while others probably defeat the very ends for which the movement was started. One of the more serious misunderstandings concerning the cause of infantile blindness is the subject of this paper.

It happens that there are several organisms which may produce inflammation in children's eyes, the one most frequently found being the gonococcus, while the streptococcus, pneumococcus, Koch-Weeks bacillus, Klebs-Lefler bacillus, etc., bring up the rear. There was an early impression that the gonococcus was the sole cause of inflammation of the eyes of the new-born and unhappily that impression has become very widespread among the lay public. I say unhappily because, as one can readily understand, if people at large believe that babies' sore eyes result only from gonorrhoea, many mothers will object or refuse to have preventive drops instilled into their children's eyes, because of their belief that there is no gonorrhoea present. Or they may object to this preventive treatment, fearing that it will be taken as an acknowledgment that there is known to be gonorrhoea in the family.

Again, if it is generally believed that only gonorrhoea causes blindness, the parents of a child whose eyes become red and swollen during the first few days of life, will quite reasonably underestimate the value of prompt treatment, if they feel sure that the child's malady is not of gonorrhoeal origin. For blindness may follow a pneumococcal infection and early treatment is just as necessary, as in the case of a gonorrhoeal infection. A few days ago I saw a baby at the Manhattan Eye, Ear and Throat Hospital, who had lost an eye as the result of a streptococcus infection, while the sight in the other eye had only been saved after persistent and careful treatment.

The following paragraph, taken from a recent number of the *Journal of the American Medical Association*, is pertinent here:

Stevenson (of Ohio) considers it advisable in the present stage of work for the prevention of blindness from babies' sore eyes, that the old idea among the public that it is always or nearly always gonorrhoeal in its origin, should be cor-

rected. He urges that the laity should be taught the plain facts, that while a certain small percentage of cases of babies' sore eyes are caused by the gonococcus the large majority of the cases are produced by the various ordinary forms of pus-producing germs which are likely to be found in any mother; and that the presence of babies' sore eyes does not necessarily imply any guilt or wrong on the part of either parent. So long as the disease is thought to be purely gonorrhoeal in its origin, there will be associated with its treatment and attempts at its prevention, a great deal of unnecessary embarrassment to the family and the physician. If such a belief is prevalent the physician will naturally be afraid, in many families, to suggest the use of prophylaxis, fearing that it will be considered a reflection on the character of the mother or father; parents also would be afraid to suggest, let alone insist on, the use of a prophylaxis. As a not necessarily gonorrhoeal disease, its public discussion will be much easier, it will receive more respectful attention, and will not be considered a part of the present almost hysteric propaganda with regard to sex hygiene and other subjects that are sometimes too freely discussed.

If we are to have every baby's eyes given preventive treatment as a routine and remedial treatment when necessary, we must disabuse the public of the idea that infantile ophthalmia is a disgrace.

Information concerning the proportion of cases in which the gonococcus is the exciting cause is meagre. But there has been enough published during the past seven or eight years to warrant our taking a pretty definite stand. Sydney Stephenson, an eminent English ophthalmologist, published in 1907 a monograph on *Ophthalmia Neonatorum*, in which he offers more data in this connection than has been contributed by any other one person up to this time. He opens his masterly work by saying, "*Ophthalmia neonatorum* may be defined as an inflammatory disease of the conjunctiva, usually appearing within the first few days of life, and generally due to the action of micro-organisms." This is the definition of a scientific man and it should be noted that he does not say that *ophthalmia neonatorum* is any specific infection, but defines it in the general term, "inflammatory disease of the conjunctiva." Reading further in Sydney Stephenson's book, we find that he estimates that gonorrhoea is the cause of about 65 per cent of all cases of *ophthalmia neonatorum* and he bases his estimate upon a study of some 1,600 cases. In a series of cases reported to the New York City Department of Health during three years, we find that the gonococcus was demonstrated in 51.55 per cent.

Of 712 cases reported to the Boston City Department of Health in 1914, the gonococcus was found in but 37. It is probable that among the remaining 675 there were many cases of catarrhal conjunctivitis.

On the other hand, Miss Helen Keller, writing on the same subject and, I am sure, writing in all sincerity, says, "*Ophthalmia neonatorum* is a venereal infection. Of the 100,000 blind people in this country, at

least 25 per cent have lost their sight through this infection." Dr. Stephenson's writings reach but a comparatively small group, members of which do not need enlightenment, but such utterances as Miss Keller's reach a far greater number of persons. It therefore seems most important that this matter should be clearly understood for in view of the information that we have, it is manifestly unfair to stigmatize in general, parents of babies with sore eyes.

During the Child Welfare Exhibit held at the Armory a couple of years ago, I contributed a very appealing picture of a little blind girl who had lost her sight as a result of infant ophthalmia. I have no idea what kind of an organism caused that child's blindness. All that I could reasonably assume was that someone had been careless, and that was the message that I meant that picture to convey. Through some misunderstanding the picture was labelled as a child who was blind for life because of the "sins of the fathers" etc. The picture was seen by thousands of persons and attracted a great deal of attention. Had any of the child's family seen it, we might have found ourselves involved in serious difficulties. If, on the other hand, it was only recognized by friends of the child's family, we can readily imagine the unenviable position in which the parents found themselves. And the chances are one to two that the stigma was undeserved.

The stamping out of venereal disease will unquestionably do a great deal toward the prevention of more than one kind of blindness but in the meantime it is only fair that the question of babies' sore eyes should be handled impartially, first, to make it understood that the disease does not necessarily have any disgrace attached to it, and more important, to publish widely the fact that any child in any walk of life may have sore eyes and go blind as a result. From the practical point of view of prevention, it does not matter much what the organism is that causes the disease. What does matter is that every child's sight shall be safeguarded and prevention-of-blindness workers start out from this point, to urge upon all doctors, midwives, nurses and others the importance of the routine use of preventive drops and skilled medical treatment for all babies with reddened or swollen eyes, lest from neglect they walk in blindness through all their days.